



GEH-01-060  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Zahm et al.

Serial No.: 09/585,192

Filed: June 1, 2000

For: METHODS AND APPARATUS FOR MEASURING  
NAVIGATIONAL PARAMETERS OF A LOCOMOTIVE

Art Unit: 3661

Examiner: B. Broadhead

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**REQUEST FOR RECONSIDERATION**

Commissioner for Patents  
Box RCE  
Washington, D.C. 20231

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OCT 31 2002  
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Sir:

In response to the Office Action dated June 18, 2002, and further in response to an examiner's telephone interview conducted October 3, 2002, Applicants respectfully request consideration of the following remarks.

**REMARKS**

The Office Action dated June 18, 2002 has been carefully reviewed and, in further consideration of the examiner's telephone interview conducted October 3, 2002, the following remarks are made.

Claims 1-31 are now pending in this application. Claims 1-31 stand rejected.

The rejection of Claims 1-3, 15-17, 30, and 31 under 35 U.S.C. § 102(e) as being anticipated by Lightsey (U.S. Patent No. 6,005,514) is respectfully traversed.

Lightsey describes a method for vehicle roll, pitch, and azimuth attitude determination using GPS carrier phase measurements from nonaligned antennas. The method includes determining S10 the configuration of GPS patch antennas 10 on a vehicle 52, that includes master and slave antennas. Antenna reference frames are then measured S12 and carrier signals are received S14 by each antenna. For each set of carrier signals, a corrected, differential carrier phase is then determined S14. The corrected differential carrier phase